

CLAIMS:

1. A screwdriver comprising:

a housing having a first axis therealong and an outer manual grasping surface which generally coaxially surrounds the axis and which provides a surface
5 which can be grasped by a user for rotating the housing about the axis;

an elongate tube attached to the housing for rotation therewith having a hollow interior and extending through the housing along the first axis to a forward presentation end of the tube;

the housing having a generally cylindrical receptacle defining a second
10 axis adjacent to and parallel to the first axis;

a rotatable storage holder mounted in the housing containing a plurality of tool bits and arranged to rotate about the second axis;

the rotatable holder including a plurality of receptacles each containing a respective one of the tool bits, the receptacles being arranged parallel to the
15 second axis and in angularly spaced relation around the second axis;

the rotatable holder and the first and second axes being arranged such that rotation of the holder causes each receptacle in turn to move from an operating position aligned with the first axis to a storage position spaced from the first axis;

an end cap slidable longitudinally relative to the housing for movement
20 from a retracted position to a forward position;

a plunger carried on the end cap and mounted within the tube for forward and rearward movement therein from the retracted position, in which a forward end of the plunger is retracted rearwardly of the holder, to the forward

position adjacent the forward presentation end;

the plunger having a magnetic bit carrying head at the forward end for carrying a bit from that receptacle of the holder which is in the operating position from the receptacle forwardly along the tube to the presentation end;

5 the holder being rotatable in the housing when the plunger is moved to the retracted position to move the receptacles to carry the bits from the operating position to the storage positions; the elongate tube having an interior surface which is polygonal i

the holder being mounted in the housing so that it is readily removable from and replaceable in the housing by movement in a direction away from the first
10 axis

and an ejection member mounted on the housing and manually operable for applying an ejection force to the holder for rejecting the holder from the housing for replacement.

2. The screwdriver according to Claim 1 wherein the ejection
15 member comprises a button manually depressible on the housing at a position thereon opposite to the holder.

3. The screwdriver according to Claim 1 wherein head of the plunger includes a flat front face for contacting a flat rear face of the bit such that rotation of the holder sweeps the bit off the flat face of the head.

20 4. The screwdriver according to Claim 1 wherein the end cap carries a sleeve which surrounds the plunger and surrounds a portion of the housing with the portion of the housing extending into the sleeve such that the plunger is enclosed in the extended and retracted positions.

5. The screwdriver according to Claim 4 wherein the sleeve is polygonal and cooperates with a polygonal portion of the housing to transfer torque therebetween.

6. The screwdriver according to Claim 1 wherein the end of the sleeve butts against a shoulder on the housing.

7. The screwdriver according to Claim 1 wherein the holder includes a magnet mounted in the holder so as to apply a magnetic force tending to hold the bits in place in the receptacles when the holder is removed from the housing.

8. The screwdriver according to Claim 7 wherein the magnet is mounted in an axial central bore of the holder.

9. The screwdriver according to Claim 1 wherein there is provided an indexing arrangement providing detents at specific angularly spaced locations of the rotation of the holder so that each detent corresponds to the angular location of a respective one of the receptacles so as to align that receptacle on the first axis.

10. The screwdriver according to Claim 9 wherein the holder includes a first and a second portion which are axially separated and butt at an radial plane of the portion and wherein the indexing arrangement comprises a spring loading the first and second portions toward one another and at least one projections on one of the portions which engages into corresponding indents on the other one of the portions such that the projection requires an increased spacing of the portions against the bias of the spring to rotate the portions between the indents.

11. A screwdriver comprising:

a housing having a first axis therealong and an outer manual grasping surface which generally coaxially surrounds the axis and which provides a surface which can be grasped by a user for rotating the housing about the axis;

an elongate tube attached to the housing for rotation therewith having
5 a hollow interior and extending through the housing along the first axis to a forward presentation end of the tube;

the housing having a generally cylindrical receptacle defining a second axis adjacent to and parallel to the first axis;

a rotatable storage holder mounted in the housing containing a plurality
10 of tool bits and arranged to rotate about the second axis;

the rotatable holder including a plurality of receptacles each containing a respective one of the tool bits, the receptacles being arranged parallel to the second axis and in angularly spaced relation around the second axis;

the rotatable holder and the first and second axes being arranged such
15 that rotation of the holder causes each receptacle in turn to move from an operating position aligned with the first axis to a storage position spaced from the first axis;

an end cap slidable longitudinally relative to the housing for movement from a retracted position to a forward position;

a plunger carried on the end cap and mounted within the tube for
20 forward and rearward movement therein from the retracted position, in which a forward end of the plunger is retracted rearwardly of the holder, to the forward position adjacent the forward presentation end;

the plunger having a magnetic bit carrying head at the forward end for

carrying a bit from that receptacle of the holder which is in the operating position from the receptacle forwardly along the tube to the presentation end;

the holder being rotatable in the housing when the plunger is moved to the retracted position to move the receptacles to carry the bits from the operating
 5 position to the storage positions; the elongate tube having an interior surface which is polygonal i

the holder being mounted in the housing so that it is readily removable from and replaceable in the housing by movement in a direction away from the first axis;

wherein the end cap carries a sleeve which surrounds the plunger and
 10 surrounds a portion of the housing with the portion of the housing extending into the sleeve such that the plunger is enclosed in the extended and retracted positions.

12. The screwdriver according to Claim 11 wherein the sleeve is polygonal and cooperates with a polygonal portion of the housing to transfer torque therebetween.

15 13. The screwdriver according to Claim 11 wherein the end of the sleeve butts against a shoulder on the housing.

14. A screwdriver comprising:

a housing having a first axis therealong and an outer manual grasping surface which generally coaxially surrounds the axis and which provides a surface
 20 which can be grasped by a user for rotating the housing about the axis;

an elongate tube attached to the housing for rotation therewith having a hollow interior and extending through the housing along the first axis to a forward presentation end of the tube;

the housing having a generally cylindrical receptacle defining a second axis adjacent to and parallel to the first axis;

a rotatable storage holder mounted in the housing containing a plurality of tool bits and arranged to rotate about the second axis;

5 the rotatable holder including a plurality of receptacles each containing a respective one of the tool bits, the receptacles being arranged parallel to the second axis and in angularly spaced relation around the second axis;

the rotatable holder and the first and second axes being arranged such that rotation of the holder causes each receptacle in turn to move from an operating
10 position aligned with the first axis to a storage position spaced from the first axis;

an end cap slidable longitudinally relative to the housing for movement from a retracted position to a forward position;

a plunger carried on the end cap and mounted within the tube for forward and rearward movement therein from the retracted position, in which a
15 forward end of the plunger is retracted rearwardly of the holder, to the forward position adjacent the forward presentation end;

the plunger having a magnetic bit carrying head at the forward end for carrying a bit from that receptacle of the holder which is in the operating position from the receptacle forwardly along the tube to the presentation end;

20 the holder being rotatable in the housing when the plunger is moved to the retracted position to move the receptacles to carry the bits from the operating position to the storage positions; the elongate tube having an interior surface which is polygonal i

the holder being mounted in the housing so that it is readily removable

from and replaceable in the housing by movement in a direction away from the first axis;

wherein the holder includes a magnet mounted in the holder so as to apply a magnetic force tending to hold the bits in place in the receptacles when the
5 holder is removed from the housing.

15. The screwdriver according to Claim 14 wherein the magnet is mounted in an axial central bore of the holder.

16. A screwdriver comprising:

a housing having a first axis therealong and an outer manual grasping
10 surface which generally coaxially surrounds the axis and which provides a surface which can be grasped by a user for rotating the housing about the axis;

an elongate tube attached to the housing for rotation therewith having a hollow interior and extending through the housing along the first axis to a forward presentation end of the tube;

15 the housing having a generally cylindrical receptacle defining a second axis adjacent to and parallel to the first axis;

a rotatable storage holder mounted in the housing containing a plurality of tool bits and arranged to rotate about the second axis;

the rotatable holder including a plurality of receptacles each containing
20 a respective one of the tool bits, the receptacles being arranged parallel to the second axis and in angularly spaced relation around the second axis;

the rotatable holder and the first and second axes being arranged such that rotation of the holder causes each receptacle in turn to move from an operating

position aligned with the first axis to a storage position spaced from the first axis;

an end cap slidable longitudinally relative to the housing for movement from a retracted position to a forward position;

a plunger carried on the end cap and mounted within the tube for forward and rearward movement therein from the retracted position, in which a forward end of the plunger is retracted rearwardly of the holder, to the forward position adjacent the forward presentation end;

the plunger having a magnetic bit carrying head at the forward end for carrying a bit from that receptacle of the holder which is in the operating position from the receptacle forwardly along the tube to the presentation end;

the holder being rotatable in the housing when the plunger is moved to the retracted position to move the receptacles to carry the bits from the operating position to the storage positions; the elongate tube having an interior surface which is polygonal i

the holder being mounted in the housing so that it is readily removable from and replaceable in the housing by movement in a direction away from the first axis;

wherein the holder includes a first portion defining the receptacles and a second portion rotatable relative to the first portion about the second axis;

the second portion having an abutment thereon for engaging the housing and preventing rotation of the second portion relative to the housing;

and an indexing arrangement providing detents at specific angularly spaced locations of the rotation of the holder so that each detent corresponds to the angular location of a respective one of the receptacles so as to align that receptacle

on the first axis.

17. The screwdriver according to Claim 16 wherein the holder includes a first and a second portion which are axially separated and butt at an radial plane of the portion and wherein the indexing arrangement comprises a spring
5 loading the first and second portions toward one another and at least one projections on one of the portions which engages into corresponding indents on the other one of the portions such that the projection requires an increased spacing of the portions against the bias of the spring to rotate the portions between the indents.